# Science Curriculum

**Intent**

Our science curriculum is ambitious and designed to inspire all pupils to thrive in an increasingly technological world. We aim to equip children with the knowledge and skills to think independently and develop an enquiring scientific mind. The future is uncertain and ever-changing and we aim to ready children to improve the world for the next generation. Teachers use the national curriculum to coherently plan and skilfully deliver sequenced and progressive lessons throughout the year and across all year groups through a variety of contexts from nursery through to Year 6. Scientific knowledge is secure and demonstrated in practical, written and verbal situations. Children are given opportunities to apply skills and abilities to master scientific skills and increase fluency.

**Implementation- Cornerstones Maestro**

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science.

Science is planned through the Cornerstones Learning Projects and the 'Love to Investigate' lessons. This is an approach to learning to harness pupils' natural curiosity, supporting them to become enthusiastic, skilled investigators.

Through our planning, we involve problem-solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and are given opportunities to use their scientific skills and research to discover the answers.

Y3/4 Visit to the National Space Centre

This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children make progress.

**Scientific Process**

Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are an integral part of the Science curriculum. Within each Science learning sequence, the following aspects form the foundation of the curriculum:

Questioning
Researching and planning
Predicting
Observing and measuring
Experimenting
Analysing
Exploring and evaluating

**Science organisation**

Each Science investigation consists of four aspects:
Essential knowledge – key background knowledge is provided by teachers to ensure that pupils will get the most from their learning
Pre-investigation tasks – the tasks are designed to give pupils the key knowledge and skills they will use in the main investigation.
Let's Investigate – the main investigation is written for the children to follow and includes key questions to promote predictions, observations and reflections.
Summarising learning – in this part of the learning sequence, pupils develop skills in:
accurate recording, using photographs, tables, charts, graphs, labelled diagrams, and video/audio recordings
concluding and reflecting, by collecting pupils' final thoughts by sharing, communicating and justifying predictions, results and scientific ideas, as well as providing pupils with opportunities to evaluate their own performances during investigations
making links to the relevance to real life by answering a series of questions.

Where possible learning outside of school takes place, including field trips for biology and places of scientific interest.

**Impact**

The impact and measure of our Science curriculum is to ensure children not only acquire the appropriate age-related knowledge linked to the science curriculum, but also the skills which equip them to progress from their starting points, and within their everyday lives.
All children will have:
A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills
A richer vocabulary, which will enable them to articulate their understanding of taught concepts.
High aspirations, which will see them through to further study, work and a successful adult life.
A life-long interest in science and its impact on our world.